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THE CONOPID FLIES OF IDAHO (DIPTERA: CONOPIDAE)¹

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For many years the Department of Entomology at the University of Idaho has carried on a survey of the insects occurring in Idaho. Recently, increased emphasis has been placed on survey work, and a series of papers concerned with the Idaho fauna is being prepared.

Intensive collecting of conopid flies in the state, particularly by W. F. Barr and the junior author, has resulted in the collection of 28 species. It is believed that the list included here is fairly complete and that relatively few additional species will be obtained in Idaho. Camras and Hurd (1957) recorded 39 species from California, and Smith (1959) listed 18 species from British Columbia. Keys to the species (except *Zodion abitus* Adams) known to occur in Idaho can be found in the paper by Camras and Hurd.

All specific determinations were made by Dr. Sidney Camras from material in the University of Idaho collection only. Appreciation is expressed to him and the individuals listed below who have contributed specimens: C. C. Ball (CCB), W. F. Barr (WFB), D. A. Burgh (DAB), T. B. O'Connell (TBO), D. Evans (DE), B. A. Foote (BAF), A. R. Gittins (ARG), R. W. Haegele (RWH), H. L. Harris (HLH), H. W. Homan (HWH), S. E. Knapp (SEK), R. A. Mackie (RAM), H. C. Manis (HCM), H. D. Neeley (HDN), R. W. Portman (RWP), P. Price (PR), W. E. Shull (WES), H. W. Smith (HWS), A. J. Walz (AJW).

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CONOPINAE

Physoconops fronto (Williston). Lewiston, August 15, 1951, on *Melilotus* sp. (WFB); Three miles south of Whitebird, August 8, 1958 (ARG); Parma, July 7, 1958 (HWH); Two miles west of Marsing, July 25, 1958, reared from alkali bee (*Nomia melanderi* Cockerell) nesting site (HWH); Grandview, August 9, 1958 (HCM); Hot Springs in Owyhee Co., July 4, 1951 (WFB); Melba, July 17, 1945, on carrots (WES); Caldwell, July 20, 1945, on carrots (WES); Massacre Rocks in Power Co., June 29, 1954 (ARG).

Physoconops obscuripennis (Williston). Priest River Forest Exp. Station, July 18, 1957 (ARG).

Physocephala burgessi (Williston). Gibbons Pass near Gibbonsville, July 20, 1957 (HCM).

Physocephala marginata (Say). Five miles west of Athol, July 16, 1959 (WFB); Slate Creek, September 19, 1955 (WFB); Jerome, July 27, 1953 (ARG).

Physocephala texana (Williston). Moscow, August 1, 1951 (WFB); Lewiston, July 8, 1945 (AJW); Slate Creek, September 18, 1955, on *Chrysothamnus* sp. (ARG); Donnelly, August 28, 1952 (SEK); Parma, June 25, 1954 (AJW); Given Springs in Owyhee Co., June 20, 1954 (WFB); Hot Springs in Owyhee Co., June 28, 1953 (WFB); Homedale, August 26, 1958, reared from alkali bee nesting site (HWH); Indian Cove, August 16, 1955 (DAB); Mountain Home, August 8, 1948 (AJW); Jerome, August 7, 1953 (ARG); two miles north of Hazleton, July 20, 1953 (ARG); five miles north of Aberdeen, July 30, 1954 (ARG); Acequia, June 30, 1951, on *Asclepias* sp. (WFB); Salmon, September 9, 1957, on *Chrysothamnus* sp. (HCM).

MYOPINAE

Zodion abitus Adams. Seven miles northwest of St. Anthony, July 17, 1956 (WFB).

Zodion americanum Wiedemann. Priest River Forest Exp. Station, August 14, 1958 (ARG); Athol, August 30, 1956 (WFB); Deary, August 14, 1951 (WFB); Arrow Junction in Nez Perce Co., June 14, 1951 (WFB); twelve miles south of Rock Creek in Twin Falls Co., August 1, 1951 (WFB); six miles northwest of St. Anthony, July 16, 1956 (WFB).

Zodion cinereventre Van Duzee. Hot Springs in Owyhee Co., June 28, 1953 (WFB); Boise, May 20, 1956 (ARG); 18 miles south of Twin Falls, July 21, 1958, on carrots (HWH); 10 miles

west of Rock Creek Canyon Ranger Station in Twin Falls Co. (ARG); Arco, August 8, 1958 (BAF); seven miles northwest of Weston, August 3, 1958, on *Chrysothamnus* sp. (ARG).

Zodion fulvifrons Say. Chilco, July 2, 1952 (WFB); Lewiston, June 2, 1948 (AJW); Spalding, May 22, 1951, on *Achilla millifolium* L. (WFB); Orofino, June 13, 1952 (WFB); Slate Creek, September 18, 1955, on *Chrysothamnus* sp. (ARG); four miles northeast of Sweet, July 3, 1956, on *Aster* sp. (WFB); Lucky Peak Dam in Ada Co., May 20, 1956, on *Brassica* sp. (ARG); two miles west of Gardena, July 3, 1956, on *Eriogonum* sp. (WFB); Melba, June 30, 1944 (WES); Murphy, May 27, 1958, on *Chaenactis* sp. (WFB); 16 miles north of Mountain Home, June 16, 1955 (HWS); 10 miles east of Rupert, June 29, 1954 (ARG); Twin Falls, August 30, 1954 (ARG); Hansen, August 3, 1944 (WES); Buhl, August 16, 1947 (WFB); Eden, July 13, 1952, on carrots (WES); six miles south of Rock Creek in Twin Falls Co., September 15, 1955, on *Chrysothamnus* sp. (WFB); 10 miles west of Massacre Rocks in Power Co., September 8, 1954 (ARG); eight miles northwest of Mackay, July 30, 1958 (ARG); Acequia, June 30, 1951, on *Achillea millifolium* L. (WFB); six miles northwest of Aberdeen, July 9, 1957, on *Asclepias* sp. (ARG); Tetonia, July 29, 1955 (RWP).

Zodion intermedium Banks. Lewiston, May 14, 1941, July 8, 1948 (AJW); Arrow Junction in Nez Perce Co., June 14, 1951 (WFB); Gifford, June 19, 1951 (WFB); Lenore, May 27, 1948 (WFB); Rubens, June 20, 1944, on turnips (WES); Spalding, May 16, 1953 (HDN); Lake Fork, July 10, 1957, on *Lupinus* sp. (WFB); Brundage Lookout in Payette National Forest, August 10, 1953 (WFB); 13 miles east of Kilgore, July 15, 1956 (WFB).

Zodion obliquefasciatum (Macquart). Lewiston, September 5, 1958, on *Chrysothamnus* sp. (WFB); four miles northeast of Sweet, July 4, 1956 (WFB); 18 miles east of Weiser, July 26, 1956, on *Grindelia* sp. (WFB); Marsing and Homedale, many specimens during June and July from alkali bee nesting sites (HWH, WFB); Grandview, July 9, 1958 (HCM); Little Valley in Owyhee Co., August 3, 1955 (DAB); Preston, July 20, 1954 (ARG); 10 miles southwest of Leesburg, July 6, 1953 (WFB); Salmon, September 14, 1957, on *Chrysothamnus* sp. (HCM).

Zodion perlongum Coquillet. Twin Falls, August 30, 1954 (ARG); 10 miles west of Massacre Rocks in Power Co., September 8, 1954 (ARG).

Robertsonomyia parva (Adams). Albion, September 1, 1925, on *Gutierrezia sarothrae* (Pursh) Britton and Rusky (RWH).

Myopa curticornis Korber. Lewiston Grade, April 23, 1938 (HLH); Lewiston, May 1, 1948 (AJW); Lenore, May 7, 1938 (HLH); Mesa, June 6, 1952 (HCM).

Myopa longipilis Banks. Moscow, April 24, 1953 (HDN); Lenore, April 8, 16, 1949 (WFB, AJW).

Myopa melanderi Banks. Tomers Butte in Latah Co., May 2, 1953 (HDN); Spalding, April 18, 1948 (WFB); Lenore, May 7, 1938 (HLH).

Myopa perplexa Camras. Tomers Butte in Latah Co., May 10, 1953 (HDN); Montour, May 10, 1949.

Myopa rubida (Bigot). Athol, May 21, 1958, on *Prunus* sp. (ARG); Chilco, July 9, 1949 (WFB); Lapwai, April 23, 1948 (AJW); 10 miles north of Nez Perce, June 5, 1952 (WFB).

Myopa vesiculosa Say. Moscow, April 19, 1937 (CCB); Elba-Basin Pass in Cassia Co., June 14, 1953 (TBO).

Myopa vicaria Walker. Moscow, April 4, 1953 (HDN); Joel, April 26, 1949 (WFB); Lenore, April 18, 1948 (AJW); Nez Perce, May 20, 1949 (AJW).

Occemyia loraria (Loew). Five miles west of Avery, July 13, 1958 (ARG); Moscow Mountain, August 9, November 9, 1957 (ARG); Deary, August 14, 1951, on *Hypericum perforatum* L. (WFB); Spalding, May 22, 1951 (WFB); Webb, May 15, 1951 (WFB); Winchester, July 7, 1944, on carrots (WES); Nez Perce, May 24, 1949 (AJW); Lawyers Canyon in Lewis Co., July 16, 1958 (ARG); two miles north of Melba, July 3, 1954, on carrots (HWH); Twin Falls, August 6, 1954, on *Melilotus* sp. (ARG); seven miles northwest of Weston, August 3, 1958, on *Chrysothamnus* sp. (ARG); Swan Lake in Bannock Co., August 1, 1954 (ARG).

Occemyia luteipes Camras. Gifford, June 28, 1951, on white dutch clover (WFB); McCall, July 25, 1949 (RWP); Star, July 19, 1944, on carrots (WES).

Occemyia modesta (Williston). Athol, August 30, 1956, on *Cirsium* sp. (WFB); Chilco, June 2, 1952 (WFB); Moscow Mountain, November 9, 1957 (ARG); Deary, June 10, 1951, on alsike clover (WFB); Winchester, July 7, 1944, on turnips (WES); five miles southwest of Twin Falls, August 6, 1954, on *Solidago* sp. (ARG); Bear Creek Camp in Custer Co., July 27, 1957 (WFB); Elba-Basin Pass in Cassia Co., June 22, 1959 (BAF); Grace, June 17, 1950 (RWP); seven miles northwest of Weston, July 3, 1958 (ARG).

Occemyia nigripes Camras. Moscow, August 1, 1957 (WFB);

Moscow Mountain, November 9, 1959 (ARG); Deary, August 14, 1951, on *Epilobium angustifolium* L. (WFB); Rubens, July 16, 1948, on *Hypericum perforatum* L. (WFB); Arrow Junction in Nez Perce Co., September 3, 1951 (WFB); Winchester, July 7, 1944 (WES); Parma, July 3, 1956 (ARG); 18 miles south of Twin Falls, July 21, 1958 (HWH); seven miles northwest of Weston, August 3, 1958, on *Chrysothamnus* sp. (ARG).

Occemyia propingua (Adams). Athol, March 14, 1954 (WFB); Moscow, July, 1932 (PR); Moscow Mountain, August 9, November 9, 1957 (ARG); Deary, August 14, 1951 (WFB); Spalding, May 22, 1951 (WFB); Gifford, June 26, 1951 (WFB); Rubens, July 6, 1944 (WES); nine miles southwest of Midvale, July 9, 1952, on *Phacelia* sp. (WFB); Middletown, July 19, 1944, on carrots (WES); Albion, September 1, 1925 (RWH); Oxford, July 17, 1950, on alfalfa (RWP); Stanley, August 6, 1950 (RWP); Ashton, August 2, 1945, on potatoes (WES); six miles northwest of St. Anthony, July 16, 1956 (WFB); eight miles northwest of Mackay July 30, 1958, on *Melilotus* sp. (WFB); 11 miles north of Howe, July 26, 1957 (RAM).

DALMANNIINAE

Dalmannia blaisdelli Cresson. Rubens, June 20, 1948 (AJW); Harpster Grade in Idaho Co., June 8, 1951 (WFB).

Dalmannia picta Williston. Gifford, June 2, 1950 (AJW); Nez Perce, May 24, 1949 (AJW).

Dalmannia vitiosa Coquillett. Six miles west of Athol, May 21, 1958 (WFB); Central Grade in Nez Perce Co., April 26, 1954 (DE); Albion, June 9, 1955 (WFB).

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